

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA



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Order Instituting Rulemaking into Policies to
Promote a Partnership Framework between
Energy Investor Owned Utilities and the
Water Sector to Promote Water-Energy
Nexus Programs.

Rulemaking 13-12-011
(Filed December 19, 2013)

**COMMENTS OF THE OFFICE OF RATEPAYER ADVOCATES
ON THE APRIL 25th WORKSHOP,
PROJECT COORDINATION GROUP PRESENTATION,
AND WORKSHOP REPORT**

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BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking into Policies to Promote a Partnership Framework between Energy Investor Owned Utilities and the Water Sector to Promote Water-Energy Nexus Programs.

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I. INTRODUCTION

On July 18, 2014, the Administrative Law Judge to Rulemaking (“R.”) 13-12-011 issued a ruling seeking comments on the April 25, 2014 workshop (“workshop”) in which a proposal was made for the determination of marginal water supply for use in an embedded energy cost calculator (“ruling”).¹ As an attachment, the ruling included a Workshop Report on the Water Energy Nexus (“report”). Pursuant to the instructions in the ruling, ORA submits its comments, concerns and recommendations on the workshop and report herein.² ORA’s concerns and recommendations are summarized as follows, and detailed immediately below:

- a. The choice of assumptions used in developing the avoided costs calculator can significantly influence cost-benefit results. Therefore the calculator should be flexible enough to allow for project partners to move from region-wide, general assumptions to vetted, water entity-specific assumptions that would most accurately represent the conditions of the partnering water entity.**

¹ See “Administrative Law Judge’s Ruling Seeking Post-Workshop Comments on April 25, 2014 Proposal for Determination of Marginal Water Supply for Use in Embedded Energy Cost Calculator”.

² ORA also attended a Project Coordination Group meeting, held the same day as the workshop, which focused upon similar subject matter as the workshop. As the PCG is within the preliminary scope of this proceeding (See Assigned Commissioner’s Preliminary Scoping Memorandum and Ruling Requesting Comments on Scope and Schedule, p. 9), some of ORA’s comments from the PCG are also captured in this document.

- b. Some policy assumptions that Navigant proposes to use in the Avoided Costs Calculator, and should be reconsidered, clarified, or both.**
- c. So that parties can provide effective feedback on the conclusions regarding the marginal supply for each hydrologic region, a more detailed explanation providing the bases and rationales supporting those conclusions is necessary. Conclusions on the marginal supply of water should be fully vetted within this rulemaking.**
- d. The consultants' work schedule in preparing the technical tool for calculating avoided costs should match the pace of the proceeding to allow incorporation of parties' comments, which should be summarized in workshop reports, and tracked via matrix or other tracking mechanism.**
- e. The PCG meeting and the public workshop should be combined into one, such that all attending parties, stakeholders, decision makers, and their respective representatives are privy to all the comments and concerns expressed regarding the methodology.**

II. DISCUSSION

- a. The choice of assumptions used in developing the avoided costs calculator can significantly influence cost-benefit results. Therefore the calculator should be flexible enough to allow for project partners to move from region-wide, general assumptions to vetted, water entity-specific assumptions that would most accurately represent the conditions of the partnering water entity.**

As presented at the workshop and summarized in the workshop report, many assumptions are needed as inputs to the technical tool that is under development and will serve to estimate the avoided cost of water and avoided embedded energy. The input values used for many of those assumptions can significantly impact the output of the tool, thereby making projects appear more or less cost-effective for both water and energy utilities. At the workshop, representatives from Navigant stated that they anticipate that the avoided cost calculator will be a flexible tool, in which assumptions will not be hard-coded, and input values can be changed by the users of the tool. While this was stated at the workshop, it is not a part of the workshop report.

ORA strongly supports the development of a flexible calculator, in which input values for assumptions can be easily changed, and sensitivity analyses can be easily performed. ORA also recommends that the instant proceeding allow for parties to review and comment upon any policy assumptions that will be used as inputs to the tool. This is necessary to help the

Commission ensure that any assumptions or default values used in the tool are appropriate assumptions and default values.

b. Some policy assumptions that Navigant proposes to use in the Avoided Costs Calculator, should be reconsidered, clarified, or both.

ORA requests that four specific policy assumptions be reconsidered or clarified at this time, as discussed in this section.

1. ORA is concerned with the consultant assumption that for avoided marginal supply of water (“marginal supply”), the “resource balance year” occurs at year zero.

In energy efficiency proceedings, avoided cost and benefit methodology uses a “resource balance year” concept.³ The resource balance year is a point in the future when, if no additional efficiency programs are undertaken, the demand will go from being less than the existing available supply to more than the existing available supply.⁴ Energy savings are calculated assuming that before the resource balance year, the avoided costs are those of the existing system, while after the resource balance year, the avoided costs are those of a marginal supply.⁵

For the purposes of determining avoided costs for water, the consultant team was tasked with determining a “short run avoided supply” and a “long run avoided supply” for avoided costs. Before the workshop presentations, ORA assumed that the “short run supply” would be an intrinsic marginal supply – that is, the portion of the existing supply that would no longer be needed if additional conservation occurred, while the “long run supply” would be an extrinsic marginal supply – that is, a new supply that would need to be developed for future water supply purposes in the absence of additional conservation measures. From the workshop presentations, it appears that the current methodology would use an extrinsic marginal supply for both the short

³ **E3, Energy Efficiency Avoided Costs 2011 Update, 2011. Available at <http://www.cpuc.ca.gov/NR/rdonlyres/18579E92-07BD-4F24-A9B4-04975E0E98F5/0/E3AvoidedCostBackground.pdf>, pp. 16-17. (This document was produced at the request of the Commission as part of R.09-11-014, the Commission’s Order Instituting Rulemaking to Examine the Commission’s Post-2008 Energy Efficiency Policies, Programs, Evaluation, Measurement, and Verification, and Related Issues.).**

⁴ *Ib id.*

⁵ *Ib id.*

and long run avoided supplies. This methodology is equivalent to setting the resource balance year to zero.

ORA is concerned with this assumption for several reasons. First, there is not sufficient disclosure of data for ORA to support the conclusion that all water utilities in California are in immediate need of a new water supply, and that in the absence of additional conservation measures, water utilities would be unable to meet demand in year zero (i.e. immediately). ORA believes that it is more likely that new water-energy programs would offset existing “intrinsic” supplies in the short term.

Secondly, for most regions, the short term avoided supplies were reported in the workshop to be recycled water and desalinated water. In order to reasonably be considered an avoided cost at year zero, these short term supplies would have to be ready to come online at year zero, with the required infrastructure. There is not sufficient disclosure of data for ORA to support the conclusion that these extrinsic marginal short term supplies would be available immediately (at year zero), or that new conservation programs would immediately result in avoided costs for the extrinsic marginal short term supplies, as discussed in the presentation.

ORA recommends using water utilities’ Urban Water Management Plans to determine when the water utilities will be in need of an extrinsic marginal supply. ORA also recommends using intrinsic supplies to determine “short term” avoided costs, and extrinsic supplies to determine “long term” avoided costs. ORA also requests clarity be provided regarding how various aspects of short term and long term supplies will be used in the calculator to determine embedded energy savings and water avoided costs – for example, when determining embedded energy savings and water avoided costs, when will the calculator use existing average embedded energy values vs. intrinsic marginal supply vs. extrinsic short-term marginal supply vs. extrinsic long-term marginal supply? Depending upon the rationales underlying these determinations, and depending on how these values will be used, ORA may have further recommendations for determining balancing years or other methods of distinguishing intrinsic vs. extrinsic and short term vs. long term marginal supply in the course of this proceeding.

- 2. ORA is concerned with the assumption in the consultants’ report presented at the workshop and provided as an attachment to the workshop report that the short and long term marginal supply are identical within each hydrologic region.**

Additional clarification is needed regarding how short and long term avoided costs and embedded energy will be accounted for in the avoided costs tool. To that end, the proposed methodology for the treatment of short and long term avoided costs and embedded energy should be explained in detail by the consultant within the rulemaking, and parties should have the opportunity to give input and feedback on the methodology.

While there is not sufficient disclosure of data for ORA to fully analyze this conclusion, if the resource balance year is assumed to be zero (as discussed above), it seems unlikely that the majority of water utilities would have desalinated or recycled water on hand to use as an immediate short term marginal supply.

3. It is unclear to ORA how the short and long term marginal supply information will be used in the avoided costs tool.

It is also unclear how short term and long term avoided costs and embedded energy should be distinguished or accounted for in the calculator. The methodology of accounting for short and long term avoided costs, as well as short and long term embedded energy, are significant policy assumptions. The methodology adopted can significantly impact the outputs of the cost-effectiveness tool. Therefore, the methodology for the treatment of short and long term avoided costs and embedded energy should be explained in detail by the consultant within the rulemaking, and parties should have the opportunity to comment upon the methodology. The consultant should also address any party comments on the methodology within the rulemaking.

4. ORA is concerned with regional generalizations, and recommends using water utility-specific data for water-energy projects.

Unlike energy networks, water supply systems in California are largely not interconnected; therefore the embedded energy in water supplies and the marginal supplies of water are not necessarily uniform in each hydrologic region. Due to varying water rights, topography, and water quality within even short distances, there can be a large range of water supplies and therefore, embedded energy in those water supplies in the same hydrologic region.

As stated in the workshop, ORA recognizes that there is a need for some generalized assumptions to occur to facilitate the inclusion of water-energy nexus projects in energy efficiency budgets at a planning level. However, ORA believes it is prudent to ensure that water-energy partnership projects are targeted, with a focus on the most cost-effective projects.

Therefore, ORA recommends a phased process for looking at embedded energy and avoided costs of water. In energy efficiency applications, more generalized, portfolio-level assumptions may be necessary, since project-specific data may not yet be available. For these filings, it seems reasonable to use the generalized regional values for the marginal supply of water (and associated avoided costs) and for the embedded energy of that marginal supply (and associated avoided energy use). However, as more project-specific data becomes available, water utility-specific values should replace the generalized regional values. This phased process will provide for a targeted approach, where specific projects with higher savings potential will be valued more than those with lower savings potential within the same hydrologic region.

- c. **So that parties can provide effective feedback on the conclusions regarding the marginal supply for each hydrologic region, a more detailed explanation providing the bases and rationales supporting those conclusions is necessary. Conclusions on the marginal supply of water should be fully vetted within this rulemaking.**

The consultant team presented conclusions at the workshop regarding the marginal water supplies for each hydrologic region, and provided a list of source documents for the conclusions. The workshop report included a document that provided additional detail on how these conclusions were drawn.

While ORA appreciates the additional information provided with the workshop report, there are still some unanswered questions as to the bases for the conclusions. ORA's lingering questions include the following: What data was gathered from what sources? Which sources were valid and useful? Which sources were relied on most heavily for conclusions, or were all sources weighted equally? Were there defining factors that weighed more heavily than other factors in determining the marginal supplies? What rationales are used to draw conclusions based upon identified data? Additionally, the GEI report suggests that experts were consulted after the April 25th workshop for additional feedback on the marginal supply conclusions, however there is no detail provided as to which experts were consulted, what the consulted experts said, or how the opinions of the experts were taken into account. ORA recommends that a "road map" be provided to explain how conclusions were drawn for the short term and long term marginal supplies.

Additionally, at the April 25th PCG meeting and workshop, multiple parties expressed concerns regarding conclusions about marginal supply. Those concerns have not yet been

formally recorded or addressed, and the conclusions for marginal supplies did not appear to change after the workshop. ORA recommends that assumptions and conclusions regarding the marginal supply of water be fully vetted within this rulemaking, including an opportunity for party comments, and explanations of how party comments are addressed regarding the marginal supplies.

- d. The consultants' work schedule in preparing the technical tool for calculating avoided costs should match the pace of the proceeding to allow incorporation of parties' comments, which should be summarized in workshop reports and tracked via matrix or other tracking mechanism.**

This proceeding offers the opportunity to include expert advice and stakeholder input in the consultants' development of water-energy tools. Parties' comments on the consultants' work presented in proceeding workshops should be addressed before work moves forward (thus far, this has not been the case in this proceeding). If stakeholder input is not included in the final consultant work product, it could result in parties objecting later in the process, potentially delaying or preventing the tool's implementation.

Additionally, ORA recommends that all workshop reports in this proceeding include parties' comments given during the workshops. For the April 25th workshop, many parties made the effort to attend the PCG meeting and/or afternoon workshop and provide comments verbally, but those comments were not provided in the workshop report. Not all parties have the time or legal expertise to provide written comments on the workshop reports. Comments made verbally at workshops and the April 25th PCG, and written comments responding to the workshop report should all be included as a part of the proceeding record.

In other CPUC proceedings such as R.13-11-005, Energy Division has provided a matrix to track parties' comments and concerns, and how that comment or concern is being addressed. ORA recommends that a similar tracking mechanism be used in this proceeding. An example matrix is attached as Appendix A.

- e. The PCG meeting and the public workshop should be combined into one, such that all attending parties, stakeholders, decision makers, and their respective representatives are privy to all the comments and concerns expressed regarding the methodology.**

For the April 25th workshop, there was a morning PCG meeting and an afternoon public workshop. Identical material was presented in each. However, there was very little overlap in

the attendees for each session. Therefore, the parties and stakeholders in attendance at only one session were not privy to the comments and concerns expressed by all parties and stakeholders. Additionally, decision makers who attended only one session were not privy to the comments and concerns expressed at the session that they did not attend. Lastly, Commission staff and contracted consultants were in attendance at both sessions, doubling the amount of staff and consultant time provided to this rulemaking on the day of the workshop. For these reasons, ORA recommends combining the PCG meeting and the public workshop into one for all PCG meetings and workshops moving forward.

ORA introduced this recommendation at the April 25th workshop, and the recommendation was implemented at the 7/1/14 workshop, with positive results. ORA appreciates Energy Division's expeditious implementation of this recommendation, and recommends that it continue for future workshops.

Respectfully submitted,

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